

THE
NATURAL HISTORY
OF
BRITISH INSECTS;

EXPLAINING THEM
IN THEIR SEVERAL STATES,
WITH THE PERIODS OF THEIR TRANSFORMATIONS,
THEIR FOOD, ECONOMY, &c.

TOGETHER WITH THE
HISTORY OF SUCH MINUTE INSECTS
AS REQUIRE INVESTIGATION BY THE MICROSCOPE.

THE WHOLE ILLUSTRATED BY
COLOURED FIGURES,
DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

BY E. DONOVAN.


VOL. VI.

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THE
NATURAL HISTORY
OF
BRITISH INSECTS.

PLATE CLXXXI.

PHALÆNA SYRINGARIA.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

GEOMETRA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings angulated, indented, fine light grey, with shades of flesh colour and brown: a brown mark across the Wings, which in an expanded Insect forms a festoon.

PHALÆNA SYRINGARIA: pectinicornis, alis suberosis, omnibus griseo flavescens, strigis repandis fuscis albisque.
Fab. Syst. Ent. 622. 13.—*Spec. Inf.* 2. 244. 17.—
Linn. Syst. Nat. 2. 860. 206.

Phalæna pectinicornis, alis margine sinuatus, fulvo, nigro, fusco
roseoque marmoratis, singulis subtus puncto nigro,
superioribus extremo dilatato, recurvis. *Geoff. Inf.*
2. 126. 32.

Roef. Inf. 1. *phal.* 3. *tab.* 10.

The English name has been given to this Moth by some collectors, on account of its being found a local species, and most frequent in Richmond park.

The Larvæ of this Insect has a very singular appearance, to which the hook on the back greatly contributes when it is nearly full fed and going into the pupa state. It feeds on the Jasmine and Lilac, and does not thrive well on any other plants. It is in the Caterpillar state in April, changes to chrysalis in May: the Fly comes forth in June.



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P L A T E CLXXXII.

MELOE MONOCEROS.

HORNED MELOE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ globular, last globule oval. Thorax roundish. Elytra soft. Head gibbous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax pointed like a horn over the head. Shells brown, with a longitudinal streak and spot on each.

MELOE MONOCEROS: *Linn. Syst. Nat.* 2. 681. 14.

NOTOXUS MONOCEROS: thorace in cornu supra caput protenso, elytris puncto fasciaque nigris. *Fab. Syst. Ent. Tom.* 1. 211. 6.

Notoxus. *Geoff. Inf.* 1. 356. tab. 6. fig. 8.

Attelabus Monoceros. *Lin. Fn. Sv.* 638.

Schæff. Icon. tab. 188. fig. 3.

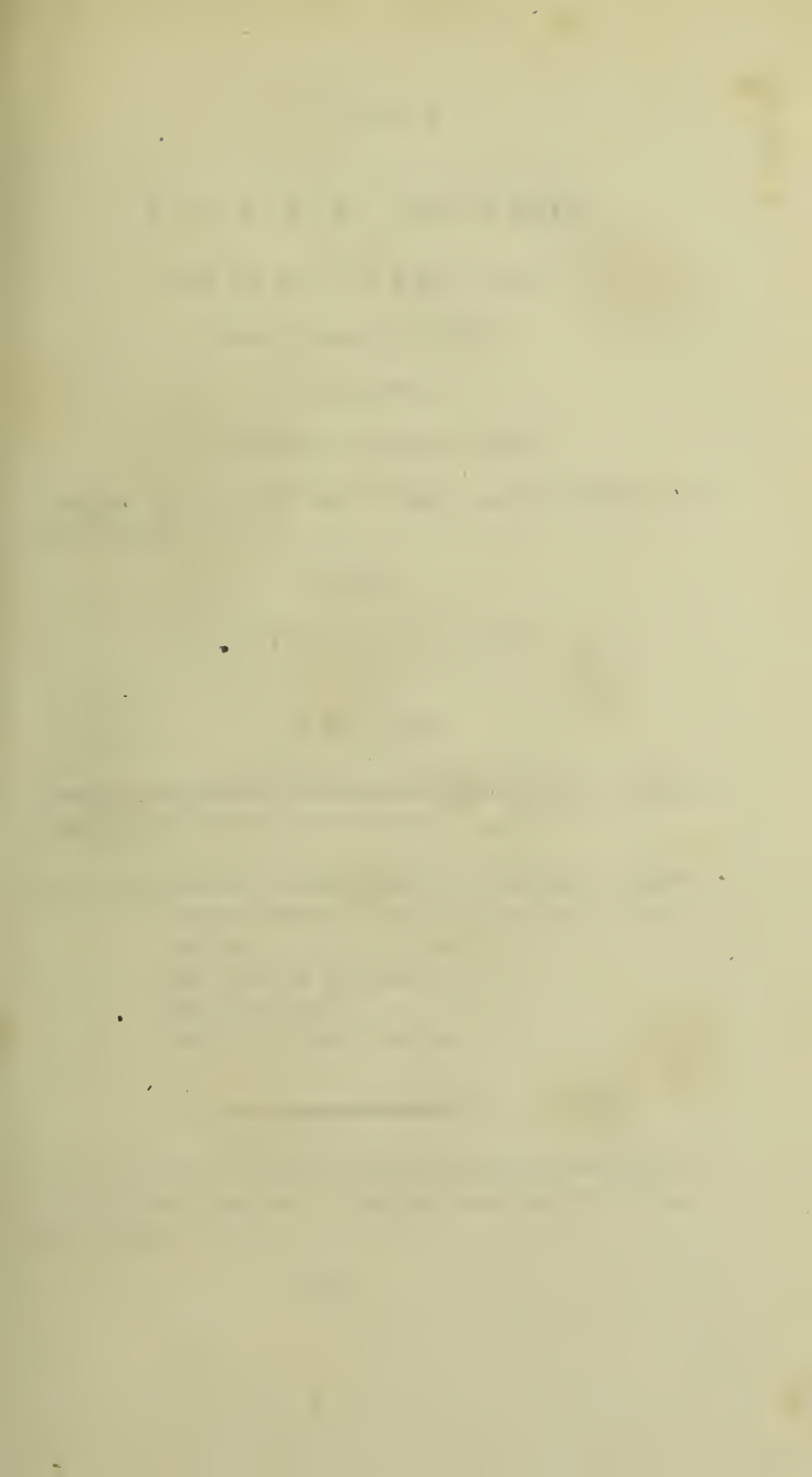
Linnæus seems to have found much difficulty in determining the genus of this Insect; once placing it amongst the Attelabi of his system, and thence removing it to the Meloë tribe. Geoffroy has another generical name, *notoxus*, and this Fabricius has adopted in his last work.

This

This is certainly a most singular Insect, and altogether unlike any other we know of in England. We cannot say whether it feeds on any particular food, or what are its peculiarities, for we have only seen one specimen besides that from which the annexed drawing is taken; and the only information we receive from the authors above quoted is, that it is a native of Europe; and is found on umbelliferous plants. It was taken in May.

Fig. 1. the natural size. Fig. 2. magnified.





P L A T E CLXXXIII.

PHALÆNA CAMELINA.

DARK PROMINENT MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

Bombyx.

SPECIFIC CHARACTER

AND

SYNONYMS.

Anterior wings brown, with two oblique waves across: two tufts on the back, formed by teeth on the wings.

PHALÆNA CAMELINA: alis deflexis denticulatis brunneis: omnibus denticulo dorsali. *Linn. Syst. Nat.* 2. 832. 80.—*Fn. Sv.* 1145.

Fab Ent. Syst. 3. p. 450. 133.

Wien. Verz. 63, 3.

Roef. Inf. 1. phal. 2. tab. 28.

The Caterpillar of this Moth is found in August, on the leaves of the Oak, Willow, Lime, &c. The Moth comes forth late in May, or early in June.

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P L A T E CLXXXIV.

PAPILIO ARION.

MAZARINE BLUE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated: wings when at rest erect. Fly by day.

SPECIFIC CHARACTER.

AND

SYNONYMS.

Above brown, disk of the wings azure, with black spots: beneath grey, with a number of small eyes.

PAPILIO ARION: alis supra fuscus: disco cœruleo; maculis atris subtus canis: punctis ocellaribus: *Lynn. Syst. Nat.* 2. 789. 230. *Fn. Sv.* 1073.

Hesperia Arion. *Fab. Ent. Syst.* 3. 293. 118.

Roef. Inf. 3. tab. 45. fig. 3. 4.

Schæff. Icon. tab. 98. fig. 5. 6.

Esp. pap. 1. tab. 20. fig. 2.

Papilio Arion is a very scarce Insect in this country; and it does not appear to be much more common in any other part of Europe. The authors quoted above have given figures or descriptions of it, but are entirely ignorant of its larva, or pupa; and Fabricius, who has selected the observations of all the preceding authors who have described it, says only, *Habitat in Europæ Pratis.*

Mr. Leman, a collector of eminence, some years since, met with it in England. We have a specimen which was taken by him, as appears from a note annexed thereto. In Roefel's figure, the blue colour of the wings is more vivid than in any example we have seen; but there can be no doubt of its being a most brilliant Insect in a recent state.



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P L A T E CLXXXV.

FIG. I.

CHRYSOMELA CALMARIENSIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ moniliform: feelers fix, becoming larger towards the end: thorax marginate: wing cases immarginate: body generally oval.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong: yellow: longitudinal streak of black down each shell.

CHRYSOMELA CALMARIENSIS: oblongiuscula ferruginea, elytris macula longitudinali nigricante. *Linn. Syst. Nat.* 2. 600. 101.

Crioceris Calmariensis: ovata cinerea, elytris vitta lineolaque baseos nigris. *Fab. Syst. Ent.* 119. 4.—*Spec. Inf.* 1. 150. 6.

Galleruca pallida, thorace nigro variegato, elytris fasciis duabus longitudinalibus nigris. *Geoffr. Inf.* 1. 253. 3.—*Sulz. Roem. Inf. tab.* 3. fig. 16.

- Fabricius says, this Insect lives on the Willow and Alder. It is found in every part of Europe, but is scarce in England.

It is a very pretty species. The under side has rather a bronzed appearance: above, in recent specimens, the light colour is very

fine yellow, but turns brown afterwards : the stripes down the elytra are not deep black, but have a greenish tint.—Taken in May. Length a quarter of an inch.

F I G. II.

MYCETOPHAGUS QUADRIMACULATUS.

FUNGUS BEETLE WITH FOUR SPOTS.

COLEOPTERA.

GENERIC CHARACTER.

Palpi four, unequal. *Maxilla* membranaceous, with a tooth or spine. Lip round, entire. *Antennæ* gradually enlarge towards the end. *Fab. Gen. Inf.*

SPECIFIC CHARACTER.

Entirely black, except one large yellow brown spot on the base of the elytra, and another near their extremities.

MYCETOPHAGUS QUADRIMACULATUS: rufus thorace elytrisq[ue] nigris his maculis duabus rufis. *Fab. Ent. Syst. t. 2. n. 1. p. 497.*

Ips maculata. *Fab. Mant. Inf. 1. n. 8. p. 45.*

Tritoma Geoff. Inf. t. 1. p. 335. tab. 6. fig. 2. e. f.

Silphoides boleti. Herbst. Archiv. 4. tes. Heft. 2. 11. p. 41. tab. 21. fig. 51.

Der Viergefleckte Pfifferkäfer. *Panz. Faun. Inf. Germ.*

Three specimens of this rare species were found together, concealed in the porous part of the Honey-comb Boletus*. According to *Herbst. Archiv.* It is usually found on plants of this genus. It is not scarce in Germany.

* Boletus Cellulosus.

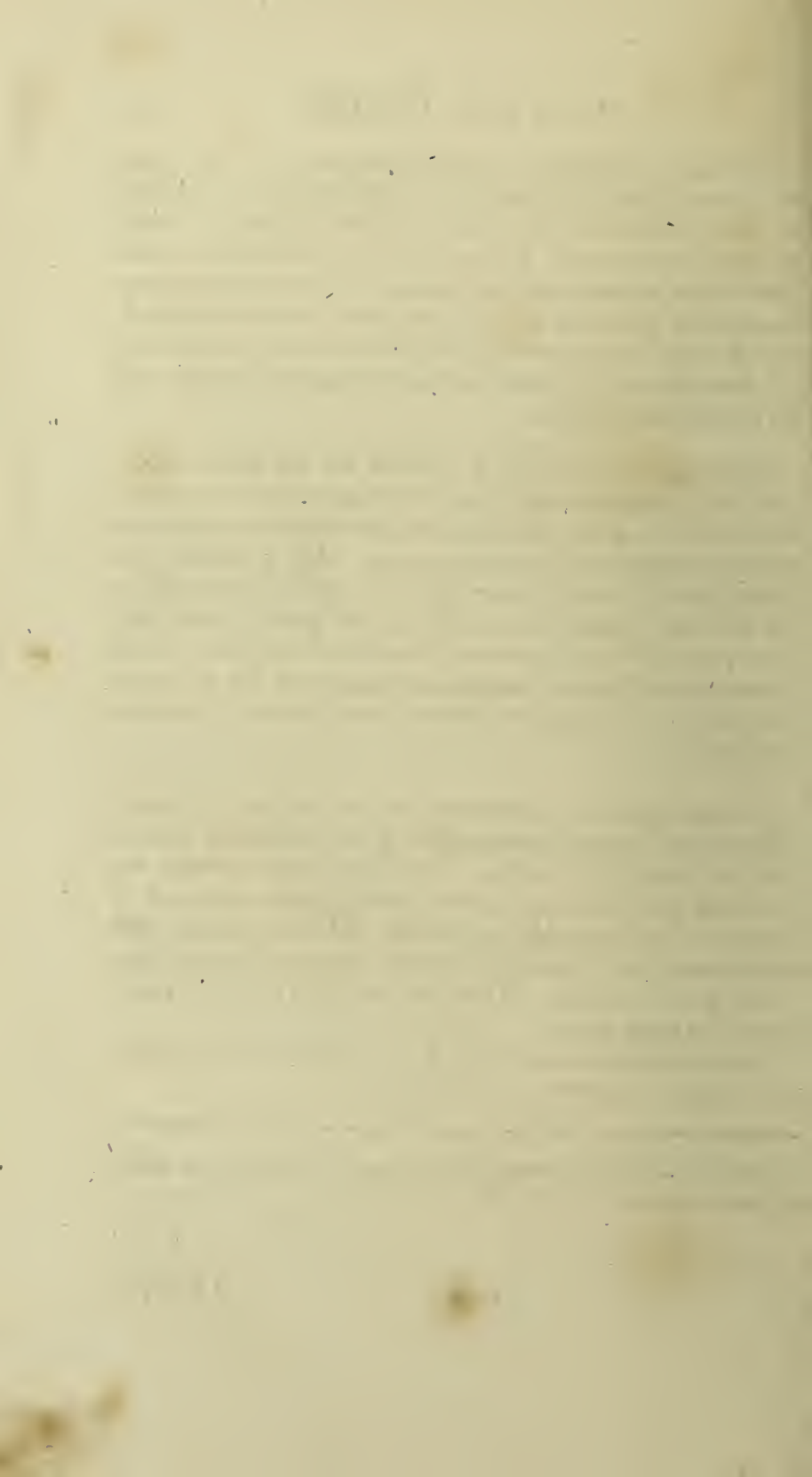
The little Insect before us might be referred to the *Silpha* genus of Linnæus; but as his definition of the *Silphæ* has been subjected to many objections and amendments of later authors, we forbear placing it amongst them. Linnæus has made no distinction between such species as have perfoliated antennæ, and those with antennæ increasing in bulk from the base to the end*, thereby including *S. Vespillo* with *S. thoracia* and *S. obscura*, though in an early edition of the *Fauna Suecica*, *S. Vespillo* was placed amongst the *Scarabæi*, and the two last with the *Cassidæ*.

Schæffer divided the *Silphæ* of Linnæus into two genera, *Silpha* and *Peltis*. Geoffroy arranged some of them amongst his *Dermestides*, and formed his genus *Peltis*, of such as have the thorax and elytra strongly margined, and perfoliated antennæ. Geoffroy described our present subject under the name *Tritoma*. Fabricius afterwards, in his *Mantissa*, arranged it under *Ips*, a new genus formed from part of the *Silphæ* of Linnæus and *Dermestides* of Geoffroy. In the *Entomologia Systematica*, he has again separated the *Ips*, and made *Mycetophagus* a new genus of fifteen species, in which he includes this Insect.

To those who have adopted the system of Fabricius, it is unnecessary to say, that the fundamental part of his arrangement is taken from the mouth of the Insect, which certainly is objectionable, because that part is dry, and very frequently injured or destroyed in Insects that have been long in a cabinet, and is very small in most kinds when alive; so that, though we have followed his arrangement in the generic definition, we have been less prolix than a full elucidation of it might require.

The figures in the annexed plate 2. 2. represent the natural size and magnified appearance.

* *Silpha* Antennæ extrorsum crassiores. Elytra marginata. Caput prominens. Thorax planiusculus, marginatus. Linn. Gen. Inf.







P L A T E CLXXXVI.

PAPILIO HERO.

SCARCE MEADOW-BROWN BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated: wings when at rest erect. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire: brown above: beneath, a large black eye near the anterior margin of the first wings: six smaller eyes on the second pair.

PAPILIO HERO: alis integerrimis fulvis: subtus anticis ocello, porticis fenis. *Linn. Syst. Nat.* 2. 793. 253.—*Fn. Sv.* 1047.—*Fab. Ent. Syst.* 3. p. 222. 695.

Papilio Hero. *Wien. Verz.* 168. 13.

Papilio Typhon. *Esp. pap. tab.* 35. fig. 3. 4.

This is a local species: it is very abundant in some marshy places in Lancashire: but we have not learnt that it has been taken in any other part of the kingdom. Many of the curious in London are particularly indebted to Mr. Phillips, of Manchester, for enriching their cabinets with *Papilio Hero*; for, though it is a plain Insect, it is esteemed for its rarity.



P L A T E CLXXXVII.

PHALÆNA EXOLETA.

SWORD GRASS MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

Noctua.

Antennæ in both sexes, like a bristle.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax crested: wings lance-shaped, varied with grey and brown, a kidney-shaped spot in the middle: four white spots on the anterior margin.

PHALÆNA EXOLETA: cristata, alis lanceolatis convolutis fusco cinereoque nebulosis, punctis quatuor marginalibus albis. *Fab. Syft. Ent.* 617. 116 — *Spec. Inf.* 2. 239. 144.

The beautiful Caterpillar of this Moth is found on the Sword Grass in August. Though its trivial name might imply that it is peculiar to this

this plant, several others are mentioned by authors as proper food for it, amongst these are the Bell flower *, Orach †, and common Pea. The Moth appears in May; and frequents marshy places.

* Campanula,

† Atriplex.



P L A T E CLXXXVIII.

HEMEROBIUS CHRYSOPS.

NEUROPTERA.

Wings four, transparent, reticulated. Tail unarmed.

GENERIC CHARACTER.

Mouth with a short horny mandible, the jaw cylindrical, straight and cleft: feelers four, unequal filiform: stemmata none: wings deflected, not folded: antennæ setaceous, projecting longer than the thorax.

SPECIFIC CHARACTER

AND

SYNONYMS.

Greenish: wings transparent, reticulated, with dark spots.

HEMEROBIUS CHRYSOPS: viridi nigroque varius, alis hyalinis: venis viridibus; lineolis nigris reticulatis. *Linn. Syst. Nat.* 2. 912. 4.—*Fn. Sv.* 1505.

Geoff. Inf. 2. 254. 2.

Fab. Ent. Syst. 1. 2. 83. f. 6.

Frisch. Inf. 4. 40. tab. 23.

Roef. Inf. 3. tab. 25. fig. 4.

Sulz. Hist. Inf. tab. 25. fig. 1.

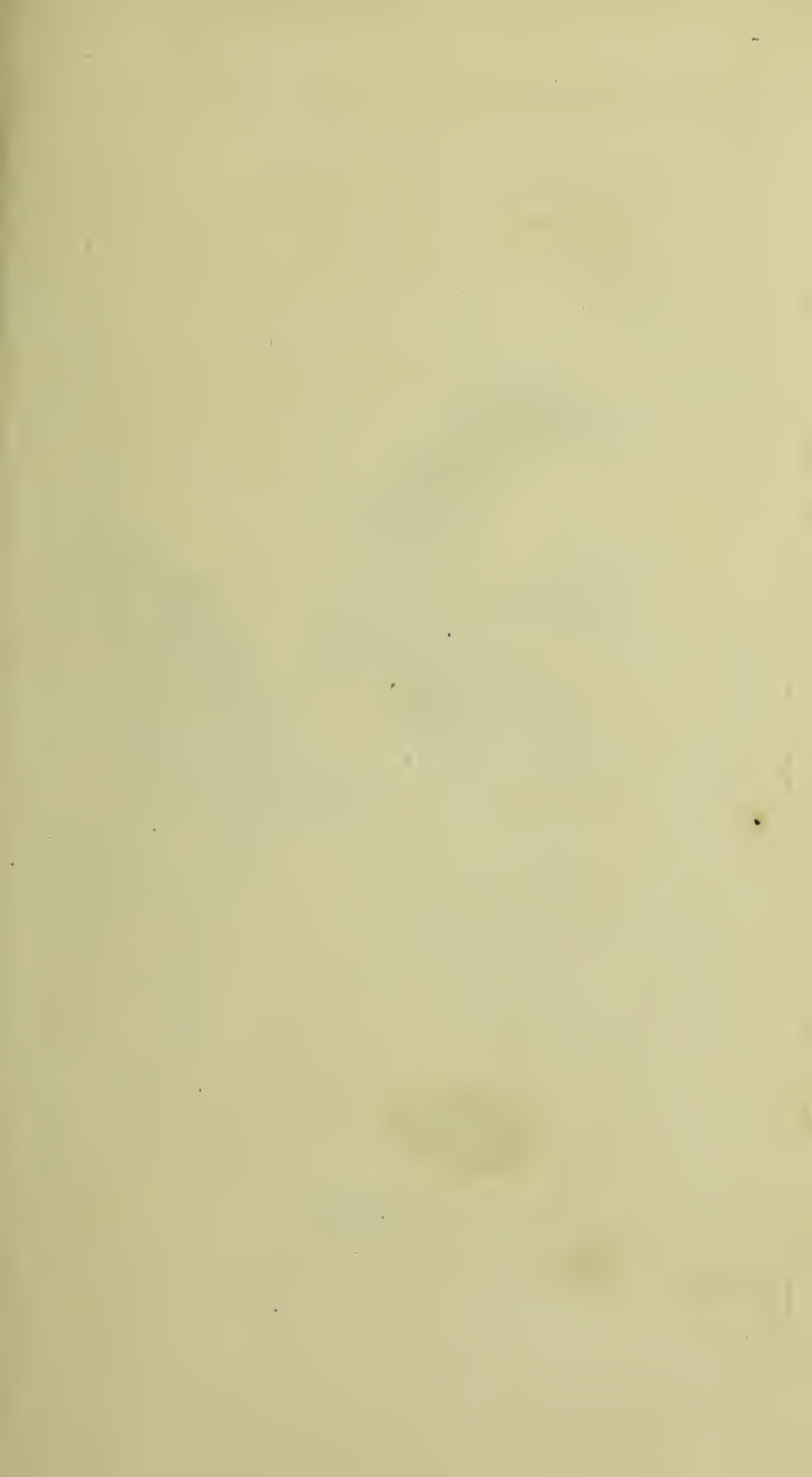
This Insect was formerly held in great esteem amongst the English collectors, on account of its rarity; and even within our knowledge the usual price for a single pair was half a guinea or upwards.

About

About the year 1790, they were taken in great plenty near London, both at Battersea and Highgate; and have been met with in other places since that time. Like the Ephemeræ, and other gauze-winged Insects, it delights in moist places, particularly among weeds. The larva is unknown, but is conceived to be of the aquatic kind.

The wings are the most pleasing objects for the microscope that can be imagined: the reticulations and feathery edges are so transparent, that they may be examined with the deepest magnifiers, which is an advantage few objects of such a size possess. The magnified figure is given, with the natural size in the annexed plate.

Fabricius has erroneously quoted the seventh and eighth figure of the fifth plate of *Schæffer's Icones*, which is certainly no other than the common kind, *Hemorobius perla*, an Insect often found in gardens, and remarkable for the fine golden colour of the eyes. The figure quoted in *Sulzer* and *Roesel* agree with our specimen.





P L A T E CLXXXIX.

PHALÆNA MENTHRASTRI.

SPOTTED WHITE MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

Bombyx.

SPECIFIC CHARACTER

AND

SYNONYMS.

White with black spots: abdomen orange, with black spots.

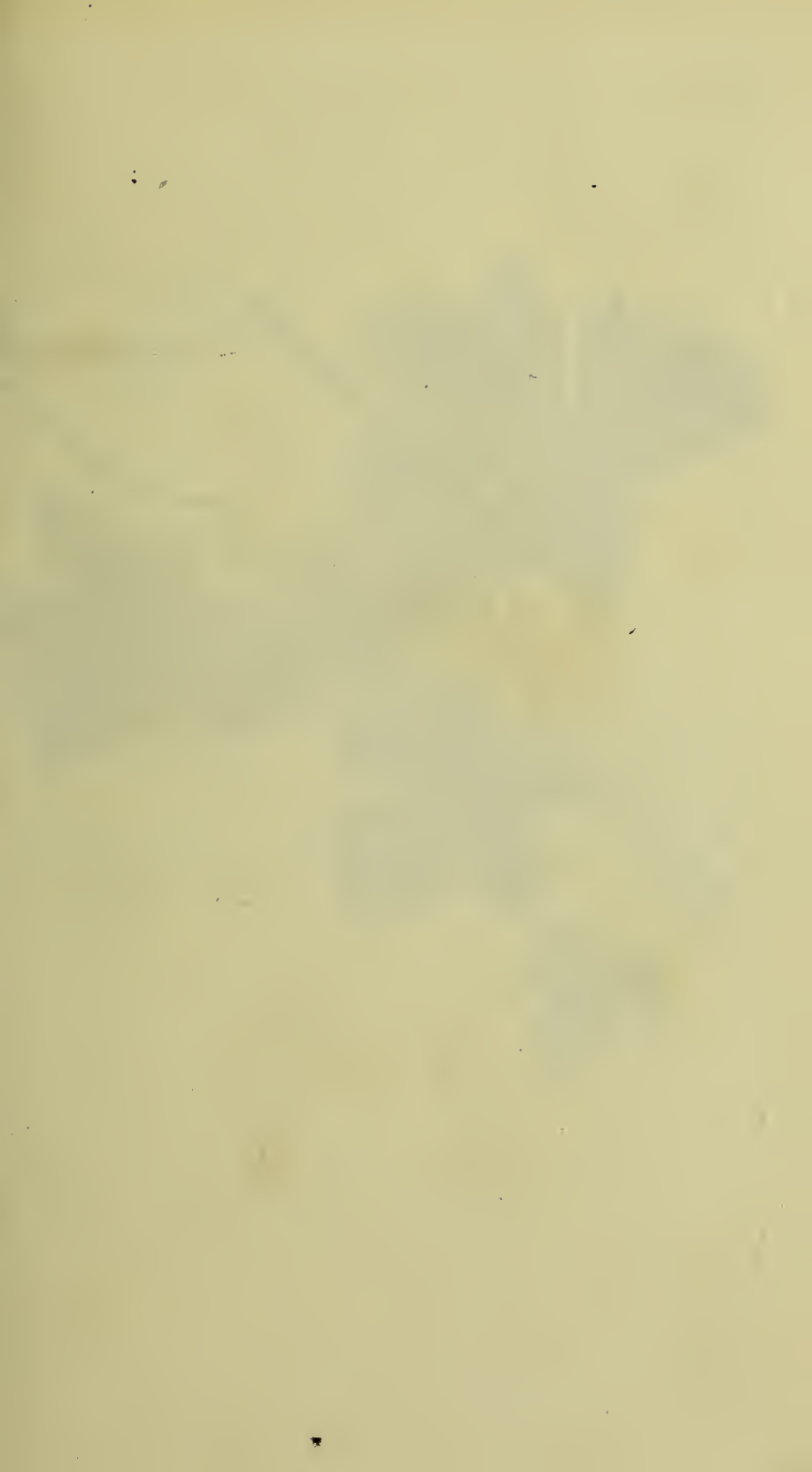
PHALÆNA MENTHRASTRI: alis deflexis albis nigro subpunctatis, abdominis dorso fulvo nigro punctato, femoribus anticis luteis. *Tab. Ent. Syst. T. 3. p. 1. 452. 140.*

Bombyx Menthrastri. Wien. Verz 54. 2.—Roef. Inf. 1 Phal. 2. t. 46. Knoch. Beytr. 3. tab. 2. fig. 5. 13.

This Insect has been confounded with *Falæna lubricipeda* by Linnæus; he makes it the variety β after De Geer. In this he has been followed by many other authors; and though Roefel, by giving the larva and Pupa of each, in two distinct plates, evidently thought them different species, his observations had no weight with other Naturalists; even Fabricius, in his *Species Insectorum*, gives them
under

under one specific name. In his last work, *Entomologia Systematica*, he has divided them, leaving the *P. lubricipeda* under its former name, and giving the specific name *Menthrastris* to the white sort, as had been done in *Wien. Verz.* 54. 2. Fabricius mentions it as a native of Germany, but from the figure of Roefel no doubt can be entertained of its being precisely the same as our English species.

The Caterpillars of both sorts are very general feeders; they will eat oak, fruit trees, and wild plants of almost every kind. They are common in the summer, change to chrysalis about August, and appear in the winged state in May and June; but, there is more than one brood of them in the course of the year, so that the time of their appearance is uncertain. The Caterpillars change their skins often; and change their colours at the same time. Those of *Phalænà Menthrastris* when small are a very bright transparent brown: then brown with dark stripes. It is not black till it appears in the last skin; and then, in many, the colour inclines to brown.









P L A T E CXC. CXCI.

SPHINX CELERIO.

SILVER STRIPE HAWK MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ somewhat prism-form, thickest in the middle: tongue (mostly) exerted: feelers two reflected: wings deflected.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire greyish with silvery white stripe: lower brownish with about six red spots in the disk.

Sphinx Celerio: alis integris griseis: striis albis, posticis fuscus: maculis sex rubris. *Linn. Syst. Fat.* 2. 800. 12.

Fab. Ent. Syst. T. p. 1. 370. 43.

Roef. Inf. 3. tab. 8.

Frisch. Inf. 13. tab. 1. fig. 2.

Cram. Inf. 3. tab. 25. B.

The Sphinx Celerio stands pre-eminent in the list of British Insects, whether we consider its rarity or uncommon beauty. Indeed, among the Insects of this tribe that are brought from remote countries, even from Asia, which boasts the most splendid species, the varieties of Sphinx Celerio are often the most beautiful: it must however be

D

owned,

owned, that, in countries where the climate and luxuriance of the soil contribute to enrich the juices of the plants, on which the Insects are nourished, they are larger, and their colours more vivid than any of the same kind produced in the northern countries of Europe.

Several years since, Mr. Francillon, of Norfolk-street in the Strand, had a living specimen of this Insect brought to him: it was taken in Bunhill-fields burying-ground; and is still preserved in his cabinet.

We have heard of other specimens being taken in this country; but can only quote one instance with confidence, namely an example taken at Eltham in Kent, and preserved in the cabinet of Dr. Latham. Specimens of this species occur in most collections of British Insects, but these are generally natives of Germany.

Roefel has given a figure of this Sphinx, with its larva and pupa; and, as we could never reasonably expect to meet with it in these states in England, correct copies of his figures are given in Plate 191. The works of Roefel are not in the hands of many; and, we are persuaded, that Plate may be therefore acceptable to most of our readers.

Sphinx Celerio is found on the vine.



P L A T E CXCII.

PHALÆNA HEXAPTERATA.

SERAPHIM MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER.

AND

SYNONYMS.

Anterior wings varied with brown and grey : posterior white with an appendage resembling a small wing at the base of each.

PHALÆNA HEXAPTERA : feticornis alis fusco griseoque variis :
posticis albis basi duplicatis. *Fab. Ent. Syst. Tom. 3.*
p. 2. 193. 233.

Phalæna Hexapterata. *Wien. Verz. 109. 10.*

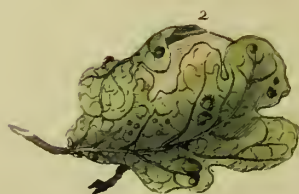
Fabricius has given an accurate description* of this extraordinary Insect ; but does not refer to any work for its figure. The nineteenth plate of Kleman's Continuation of Roefel's *Insecten-Belustigung*, entitled *Insecten-Geschichte*, certainly escaped his notice ;

* Media. Alæ anticæ griseæ, fusco undatæ imprimis basi apiceque, in medio parum dilutiores lunula fusca. Posticæ albæ ad basin ala notha, rotundata, alba, immaculata. Subtus omnes cineræ puncto medio, fusco.—*Fab.*

for in that plate we find both sexes, Figures *a*, *b*: and from this account we learn, that *Phalæna Hexapterata* is a native of Germany. The female has four wings: the male appears at first sight to have six, which is more than any tribe of Insects are furnished with: a small appendage very much resembling a wing, and of the same texture, arising from the base of the second pair of wings next the abdomen. The nerves of the true wing ramify into this appendage; which, when the Insect is expanded, give it a most singular appearance. In the annexed plate this appendage is magnified, in order the more accurately to exhibit its true form and tendons.

Our specimen was taken on Epping Forest in 1795. It is very rare in England. Fabricius says it feeds on the Beech*.

* Habitat in *Fago Sylvatica*.



P L A T E CXCIII.

PHALÆNA PYRAMIDEA.

COPPER-UNDERWING MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Anterior wings dark brown, with three waved repandate stripes of yellowish : posterior pair coppery ferruginous.

PHALÆNA PYRAMIDEA. *Noctua cristata*, alis fuscis, strigis tribus undatis flavescens repandis, posticis ferrugineis. *Linn. Syst. Nat.* 2. 856. 181.—*Fab. Spec. Inf.* 2. 232. 119.—*Ent. Syst.* I. 3. p. 2. 98. 290.

Phalæna feticornis spirilinguis, alis deflexis, superioribus fuscis, lineis transversis undulatis nigris, inferioribus ferrugineis. *Geoff. Inf.* 2. 160. 99.

Phalæna media, alis longis angustis, exterioribus linealis et areolis nigris, albis atro rubentibus transversis pulcre depictis, interioribus obscure rubris. *Raj. Inf.* 159. 9.

The singular pyramidal protuberance on the posterior part of the Caterpillar has furnished an excellent trivial name for this species. It is found on the Oak, Sallow, and Blackthorn in May ; changes

to the pupa state the first week in June ; the Moth comes forth in July. The Caterpillar spins a fine white filken web between two or three leaves in the manner represented in the plate at Fig. 1. Fig 2, the chrysalis, which the web envelopes. *Phalæna Pyramidea* is not a common species in this country.



P L A T E CXCIV.

CHRYSOMELA FASTUOSA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ moniliform: feelers fix, becoming larger towards the end: thorax marginate: wing-cafes immarginate: body generally oval.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oval, shining like gold, with three longitudinal stripes of blue on the wing-cafes.

CHRYSOMELA FASTUOSA; ovata aurea, coleoptris lineis tribus coeruleis. *Fab. Syst. Ent.* 101. 36.—*Spec. Inf.* 1. 124. 48.—*Linn. Syst. Nat.* 2. 588. 18.

Chrysomela viridis nitida, thorace antice excavato, fasciis elytrorum longitudinalibus coeruleis. *Geoff. Inf.* 1. 261. 11.

Coccinella fastuosa. *Scop. Ent. carn.* 232.

This beautiful Insect is rarely taken in England: we sometimes receive it from Germany, where it is more common; a variety of it is also a native of North America.

The natural size is shewn at Fig. 1. In some specimens blue is the predominant colour, in others a fine bronze or golden hue; the sexes are distinguished by the colours in many instances.



P L A T E C X C V.

S P H I N X Z O N A T A.

RED-BELTED SPHINX.

LEPIDOPTERA.

G E N E R I C C H A R A C T E R.

Antennæ somewhat prism-form, thickest in the middle : tongue (mostly) exerted : feelers two reflected : wings deflected.

S P E C I F I C C H A R A C T E R.

Wings transparent, veined, margined with black : abdomen black with a red belt, and bearded at the extremity.

This is apparently an undescribed Insect. It bears the strongest affinity to the *Sphinx Tipuliformis* of Linnæus ; but as the zone or belt of red colour is an unerring distinction of our Insect, it cannot belong to that species. Fabricius having separated the Linnæan sphinges into three new genera, *Sphinx*, *Sesia*, and *Zygaena*, this Insect must be included under the genus *Sesia* of his system ; two of the species he has described under that head, *S. culiciformis* and *tenthrediniformis* bear some resemblance to our *Sphinx zonata*, but are certainly distinct species.

Sphinx zonata is rare in England ; the natural size is shown at Fig. 1. of the annexed plate. The fine purple appearance of the body disappears in specimens that have been kept long in a cabinet.

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PLATE CXCVI.

PHALÆNA WAUARIA.

GOOSEBERRY MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings grey: four black, irregular stripes on the interior part of the upper wings; one resembling letter L.

PHALÆNA WAUARIA: pectinicornis, alis cinereis, anticis fasciis quatuor nigris abbreviatis inequalibus. *Linn. Syst. Nat.* 2. 863. 219.—*Fn. Sv.* 1248.—*Fab. Spec. Inf.* 2. 249. 43.

Phlæna minor, alis amplis cinereo albicantibus 4 in exteriorum margine maculis linearibus e rufo nigricantibus. *Raj. Inf.* 179.

Merian Europ. I. tab. 25. *fig.* 151.

Frisch. Inf. 3. *tab.* 3. *fig.* 1.

Roef. Inf. 1. *phal.* 3. *tab.* 4.

Wilks Pap. 52. *tab.* 2. a. 2.

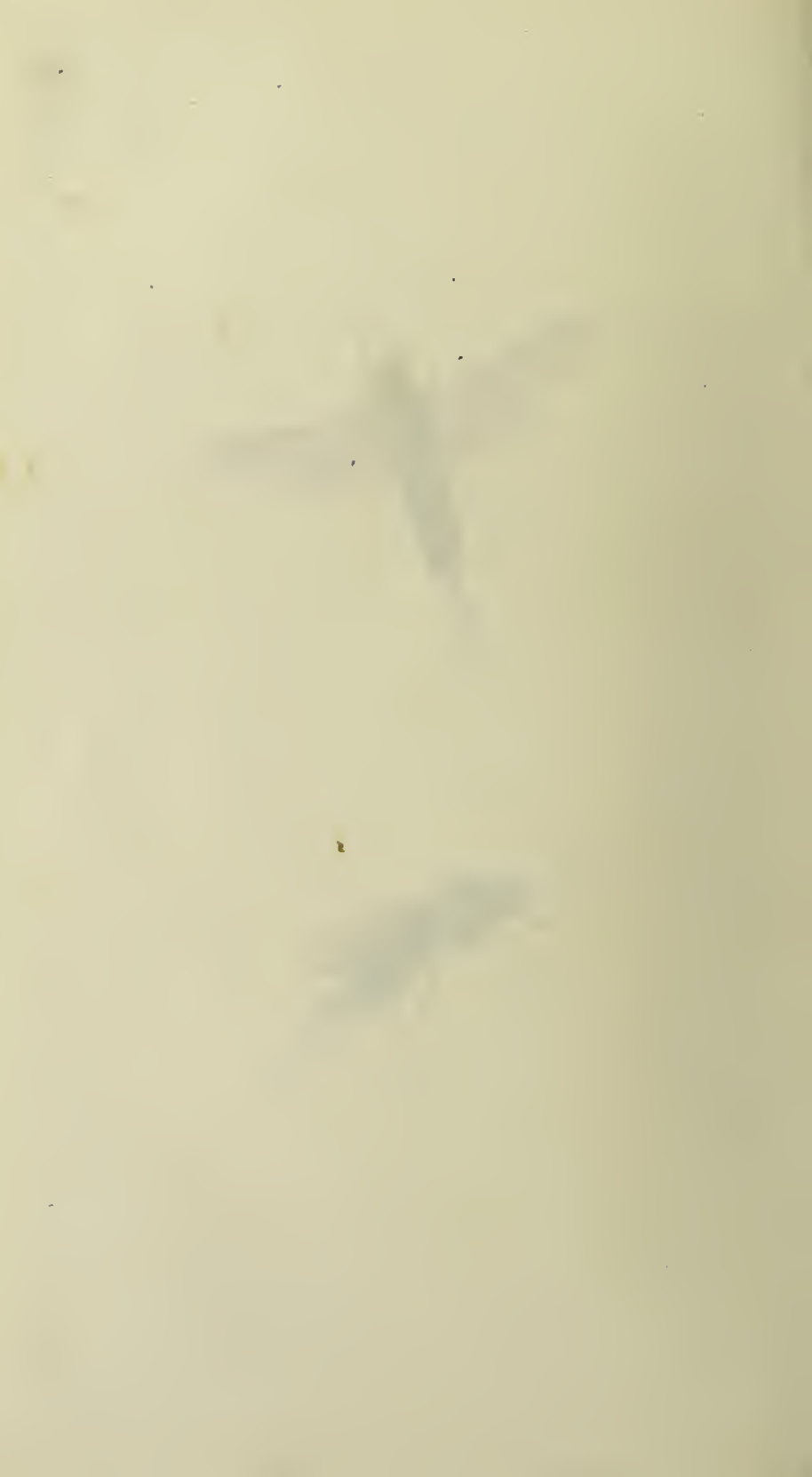
Ammiral. Inf. tab. 13. *fig.* 2. 3.

Except *Phalæna Grossulariata* *, figured in the early part of this work, few species are more common than this, on the smaller kinds of fruit trees, but particularly the Gooseberry. Harris calls it the L Moth from the resemblance which one of the black marks on the anterior wing bear to that letter.

The young Caterpillars appear almost as early as the leaves, and change to chrysalis late in May; in this state they remain about twenty days before the Moth is produced.

* Currant Moth.





P L A T E CXCVII.

SIREX GIGAS.

LARGEST TAILED WASP.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth with a thick horny truncated short denticulate mandible: feelers four, the hind ones longer and thicker upwards: antennæ filiform, of more than twenty-four joints: sting exerted, serrated, and stiff: abdomen sessile, and terminating in a point: wings lanceolate, incumbent, the lower ones shorter.

SPECIFIC CHARACTER

AND

SYNONYMS.

Abdomen of nine segments; the 3, 4, 5, 6, black; the others yellow: thorax hairy.

SIREX GIGAS abdomine ferrugineo: segmentis. 3. 4. 5. 6 nigris, thorace villoso. *Linn. Syst. Nat.* 2. 928. 1.—

Fn. Sv. 1573.

Fab. Ent. Syst. 2. p. 124. 139.

Roes. Inf. 2. *Vesp.* tab. 8. 9.

Sulz. Hist. Inf. tab. 18. fig. 114.

Schæff. Icon. tab. 1. fig. 2. 3.

Reaum. Inf. 6. tab. 31. fig. 1. 2.

Degeer Inf. 1. tab. 36. fig. 1. 2.

Seb. Mus. 4. tab. 53. fig. 15.

The

The *Sirex* genus, as it stands in the *Entomologia Systematica* of Fabricius, includes only twenty-six species; these are chiefly European Insects; but very few are natives of this country. The *Sirex Gigas* is found in the north of Europe; it has been taken in England, but very rarely: Yeats and Berkenhout mention it as a British species, and we have been informed that it is sometimes taken in Scotland. It is likely to be met with in Pine forests, as the female seems to prefer that wood to deposit her eggs in. As no English Entomologist has attempted to describe the particular habits of this tribe of Insects, and especially of *Sirex Gigas*, the following particulars may be satisfactory to our readers.

The extensive forests of Germany furnished the accurate Roessel with many opportunities of discovering and observing the transformations of Insects that are rarely to be found in other parts of Europe; and this enabled him to afford the world a particular description and series of figures of all the changes of *Sirex Gigas*, in the *Bombyliorum et Vesparum* of his *Insecten Belustigung*. His figure of the female Insect agrees with that we have given; the male is considerably smaller, and has no sting*. The sting of the female consist of three parts, a sheath which divides into two parts or valves, and a fine instrument somewhat resembling a needle; it is with this instrument it wounds its enemies, and the sting is said to cause an excruciating pain. The microscope discovers this part to be beset with a number of very minute teeth, like the edge of a saw; and with this instrument the creature can pierce the wood of the soundest trees. We suspect, indeed, that it does not often deposit its eggs in such as are decayed, but rather in those which will supply the larva when hatched with nutritive juices, such as can be derived only from healthy and sappy timber. The eggs are laid in clusters of two or three hundred together; they are of a pale yellow colour, about the thirtieth part of an inch in length, and shaped like a weaver's shuttle. The larva lives in the body of the tree, enlarging its habitation as it increases in size, for it never leaves the tree till it becomes

* This is a generical distinction.

a winged creature. The larva, when full grown, is about an inch and a quarter in length, and as thick as a goose quill. It is a heavy sluggish creature, almost cylindrical, the head very small, and the whole of an uniform pellucid yellowish colour. It has a small spine at the end of the body like those by which the larva of some spinges are distinguished: this spine is also a striking character in the perfect Sirex. In the pupa the form of the winged creature is more visible than in the larva state; it is of a browner colour than the larva, and the rudiment of the sting and legs are very visible.

In the early editions of the *Systema Naturæ* of Linnæus, the Sirices are arranged with the ichneumons in one genus; but later observations induced Linnæus to make two genera of them in his last works. *Geoffroy* and *Schæffer* have added some particulars to the Linnæan generic character; these principally relate to the number of joints in the tarsi.



P L A T E CXCVIII.

SCOLOPENDRA FORFICATA.

APTERA.

WITHOUT WINGS.

GENERIC CHARACTER.

Antennæ setaceous: feelers two, filiform, united between the jaws: lip toothed and cleft: body long, depressed, consisting of numerous transverse segments: legs numerous, as many on each side as segments of the body.

SPECIFIC CHARACTER

AND

SYNONYMS.

Feet fifteen on each side.

- SCOLOPENDRA FORFICATA: pedibus utrinque 15. *Linn. Syst. Nat.* 2. 1062. 3.—*Fn. Sv.* 2064.—*Geoffr. Inf.* 2. 674. 1.
—*Fab. Spec. Inf.* 2. 532. 3 —*Ent. Syst.* 2. 390. 4.
Scolopendra rufo fusca, pedibus utrinque 15. *Degeer Inf.* 7. 557. 1.
tab. 35. *fig.* 12.
Sulz. Inf. tab. 24. *fig.* 155.
Schæf. I. pl. 46. 12.
-

This singular creature not only changes its skin several times; but, as it advances in age, the segments of which the body is composed increase in number: the Insect when full grown has nine such segments. Linnæus mentions it as a native of America: in many

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parts

parts of Europe it is not uncommon : in England it is found under loose stones in damp places, and runs swiftly.

Fabricius has made a false quotation under this species to the *Fundamenta Entomologica* of *Schæffer*; as errors will occur in the most accurate work, we should not deem it necessary to notice this circumstance, if he had not continued the same mistake from his *Species Insectorum* published in 1781 to his last work *Entomologia Systematica, emenda et aucta, &c.* published in 1793.—his reference is *Schæf. Elem. tab. 3. fig. 1.* and on examining that part of *Schæffer's* works, we find the figure he quotes is a spider *Scolopendra forficata* is given in the 46th plate of Vol. I. of that author's *Icones Insectorum circa Rastisbonam indigenorum, &c.* as quoted amongst the synonyms above.

The *Scolopendra forficata* is, we believe, the largest of the genus found in this country. In many parts of the world, some kinds are found of a frightful size and aspect; the *Scolopendra Morfitans* of the East-Indies, is about five inches in length, and as thick as a goose quill. Sir G. Staunton, in his *Historical Account of the Embassy to China*, mentions the *Scolopendras* and scorpions of that country: we have one species of the former from China that exceeds in magnitude every one of the genus we have seen from other parts of the world, and is perhaps the largest known; it is near one foot in length, and is about one inch and an half round the girth of the body; the colour is of a fine shining chestnut brown, the legs inclining to yellow. The most singular Insect of this kind in England is the *Scolopendra electrica*, which sometimes emits a spark or flash of light in the dark,

Fig. I. represents the under side of the head and antennæ, magnified.



P L A T E CXCIX.

P A P I L I O C. *album*.

COMMA BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated : wings when at rest erect. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings angulated, fulvous, with black spots: beneath, a white character resembling letter C in the posterior wings.

PAPILIO C. *album* : alis angulatis fulvis nigro maculatis, posticis
 fultus C. albo notatis. *Lin. Syst. Nat.* 2. 778.
 168.—*Fn. Sv.* 1059.—*Fab. Spec. Inf.* 2. 93. 409.
Robert. Icon. tab. 23.
Merian. Europ. tab. 14. fig. 1.
Reaum. Inf. 1. tab. 27. fig. 9. 10.
Harris Aurel. tab. 1: fig. a—d.
Roef. Inf. 1. pap. 1. tab. 5.
Esp. pap. 1. tab. 13. fig. 3.
Bergstræff. Inf. 2. tab. 38. fig. 1—5.
Seb. Mus. 4. tab. 1. fig. G.

In colours and markings the Comma Butterfly seems at first sight allied to *Papilio Urticæ* (*Tortoise-shell Butterfly*), but the elegant scalloped margin of the wings sufficiently distinguishes it from every

other British species: indeed wings indented in this remarkable manner are rarely seen in any Insects, those from foreign countries not excepted. *Papilio G aureum*, a native of Asia according to Fabricius, and figured amongst the Insects found in North America, by *Abbot*, approaches nearer to it than any distinct species we are acquainted with. The larva of the Comma Butterfly is distinguished by having a broad white space on the back, extending from the posterior extremity to the eighth joint of the body. It has also one peculiarity that must not be omitted, namely, that when suspended by the tail, as is frequently its posture in a quiescent state, the head is bent upwards, and the whole creature has a falcated or hooked appearance.

There is more than one brood of this species in a year: the Butterflies of the first brood appear in June, those of the second late in August. The Caterpillars are sometimes found in February, but oftener in July; they remain about a fortnight in chrysalis.





P L A T E C C.

PAPILIO DAPLIDICE.

BATH-WHITE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated: wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings round, white: margin brown, underfide with yellow, green, and white spots.

PAPILIO DAPLIDICE: alis integris rotundatis albis, margine fuscis, subtus luteo griseis albo maculatis. *Lin. Syst. Nat.* 2. 760. 81. *Papilio Daplidice.* *Pall Spicil. fasc.* 9. tab. 2.

Cramer Inf. 15. tab. 171. fig. C. D.

Seb. Mus. 4. tab. 23. fig. 11. 12. 15. 16.

Schæff. Icon. tab. 79. fig. 2. 3.

Petiv. Gazoph. tab. 1. fig. 7.

In a former description we have noticed the locality of one species of the Butterfly tribe (*Pap. Hero.*) in this country; of the *Pap. Daplidice* we have also to observe, that it is only found in the environs of Bath. We have been informed that it is found in some

part of Scotland, but our information does not fully authorize us to give it as a native of that part of the British empire. If it is any where common, it is in Germany and Hungary. It is found in Africa, and we have also a variety of it from North America. Fabricius does not mention it as a native of England; and it is so scarce with us that few English cabinets have a specimen of it. The trivial appellation of *Bath-White* Butterfly has been given to it by some collectors. The small number of foreign authors who have figured this species sufficiently denotes its scarcity in Europe, and we are not acquainted with the works of any English author in which it is delineated.



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P L A T E CCI.

PANORPA COMMUNIS.

NEUROPTERA.

GENERIC CHARACTER.

Mouth lengthened into a cylindrical horny proboscis: feelers four, nearly equal: stemmata three: antennæ filiform, longer than the thorax: tail of the male armed with a chelate appendage; that of the female unarmed.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings equal length, spotted with black.

PANORPA COMMUNIS: alis æqualibus nigro maculatis. *Lin. Syst.*

Nat. 2. 915. 1.

Fn. Sv. 15. 16.

Geoff. Inf. 2. 260. 1. *tab.* 14. *fig.* 2.

Degeer. Inf. 2. 2. 36. *tab.* 24. *fig.* 3. 4.

Reaum. Inf. 4. *tab.* 8. *fig.* 9.

Sulz. Hist. Inf. tab. 25. *fig.* 5. 6.

Schæff. Icon. tab. 88. *fig.* 7.

The *Panorpa communis* is very common in fields in the summer. Its metamorphosis is entirely unknown.

The tail of the male is armed with a weapon, somewhat resembling the sting of a scorpion. The tail of the female has an appendage, but very different in its structure. Those parts of both sexes are represented in our plate, of the natural size, and magnified.





P L A T E CCII.

FIG. I.

PHALÆNA DITARIA.

MAID OF HONOR MOTH*.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered : wings green, with brown marginal spots.

PHALÆNA DITARIA : pectinicornis alis viridibus : maculis marginalibus ferrugineis. *Fab. Ent. Syst.* 3. p. 2. 152. 82.

Phalæna bajularia : *Wien. Verz.* 97. 6.

This appears to be a local species. It has been found for many years past in the month of June, near the Oak of Honor, by Peckham. We have never heard that it has been taken in any other place in England.

* *Harris's Catal.* 31. 218.

Fabricius refers only to one author for this species. He says it feeds on the oak.

FIG. II.

PHALÆNA ALBICILLATA.

CLIFDEN BEAUTY.

LEPIDOPTERA.

PHALÆNA,

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ setaceous: wings whitish in the middle, with a broad margin of pale black; a large dark spot on the interior part of the upper wings.

PHALÆNA ALBICILLATA: feticornis alis omnibus nigricantibus: fascia lata alba immaculata. *Linn. Syst. Nat.* 2, 870. 255.—*Fn. Sv.* 1278.—*Fab. Ent. Syst.* 3, 182. 190.
Clerk. Icon. tab. 1. *fig.* 12.
Knoch. Beytr. 1. 40. 1. *tab.* 2. *fig.* 8.

The trivial appellation, *Clifden Beauty*, has been given to this Insect by some early English entomologists, who had not met with it in any other part of the country. It has since been taken in several other parts of the kingdom; but in Kent particularly. Clerk deemed it worthy of a place among his rarities; and it is still considered an exceeding scarce and fine species. Our specimen was taken in June, 1797, in Darent Wood, Dartford.

FIG.

FIG. III.

PHALÆNA PORCELLATA.

CLIFDEN BEAUTY LIKENESS.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ setaceous: anterior wings white, with three brown bands, a white spot on the exterior one: posterior white, with a brown margin.

PHALÆNA PORCELLATA: feticornis alis anticis albis: faciis tribus fuscus; media dimidiata, postica marginali: macula alba. *Fab. Ent Syst.* 3. 185. 201.

Phalæna Porcellata. *Wien. Verz.* 114. 1.

The similarity of this to the foregoing species, induced us to figure both on the same Plate. Phalæna Porcellata is very common in summer. It appears in the winged state about the latter end of May. Linnæus has not described this Insect. Fabricius has given its specific character, above quoted. We suspect that it has not been figured by any author.



P L A T E CCIII.

FULGORA EUROPÆA.

EUROPEAN LANTERN CARRIER.

HEMIPTERA.

GENERIC CHARACTER.

Head hollow, inflated, advanced forward: antennæ seated below the eyes, short, and consisting of four joints, the outer one larger and globular: rostrum elongated, inflected, and four jointed: legs formed for walking.

SPECIFIC CHARACTER

AND

SYNONYMS,

Fore part of the head conic: body green: wings transparent and reticulated.

FULGORA EUROPÆA: fronte conica, corpore viridi alis hyalinis reticulatis. *Linn. Syst. Nat.* 2. 704. 9.

Fab. Ent. Syst. 4. p. 6. 19.

Sulz. Hist. Inf. tab. 9: fig. 5.

Stoll. Cicad. 1. tab. 11. fig. 51.

Simple as this little creature may appear to the general reader, the Entomologists of this country esteem it a rarity; for it was not imagined that England produced any species of its singular genus till lately.

Mr.

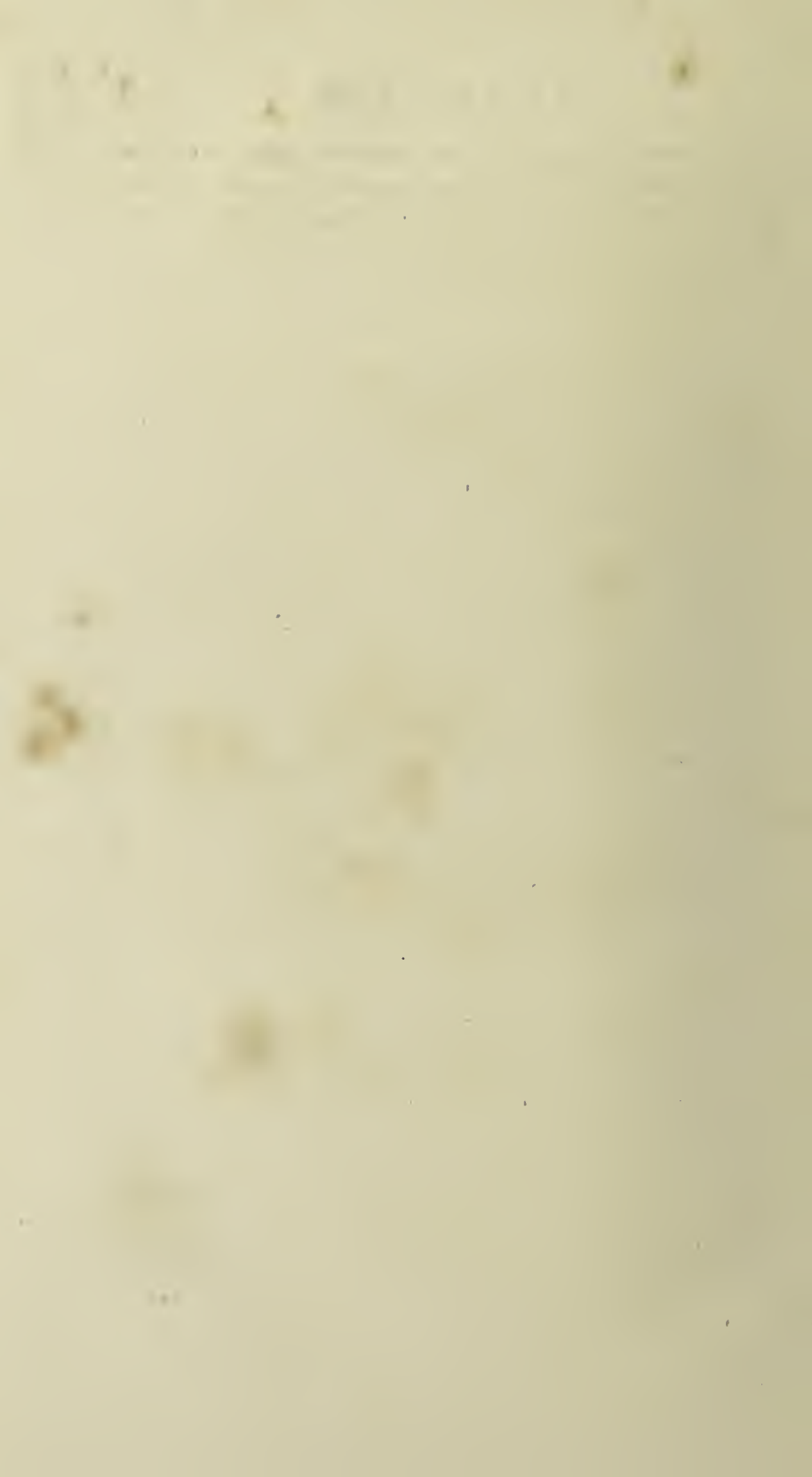
Mr. Yeats, in his Institutions of Entomology, mentions two species of it that have been caught in this country; one by Mr. *Hudson*, author of the *Flora Anglica*, the other by Mr. *Grey*. It is to be lamented, that he does not inform us precisely what were the species. We learn that *Fulgora Europæa* was the Insect taken by Mr. *Hudson*; the other seems undetermined.

The *Fulgora Europæa* very much resembles some of the *Cicadæ* in form and size, and have, therefore, been probably overlooked by English collectors of Insects. *Fabricius* describes it as a native of France and Germany; but it is very scarce in cabinets of foreign Insects also. Perhaps it is not common in any country.

This species does not exhibit any prominent features of its singular genus; it has only a small conic hollow projection, or lantern on the fore-part of the head, instead of the large projection that characterise most of the exotic *Fulgoræ*. It is not unlikely, however, that it may possess, though in a small degree, the astonishing property of diffusing a radiance of light, which particularly distinguish *F. Lanternaria* of South America, *F. Candalaria* of China, and several other species. The light of some of these Insects, according to the reports of Naturalists, and travellers, in foreign countries, is sufficiently vivid and constant to answer many purposes. Some of the Catholic missionaries assert, that they could see distinctly to read and write by the light of one of them; and that several of them being fastened together, serve to light the Indians when they travel in the night.

The rostrum, or beak, through which the *Fulgoræ Europæa* (like others of the same genus) sucks its nutriment, seems to form a part of the hollow projection in the front of the head; the tube lays close to the belly, between the six legs. To explain the singular structure of this tube or rostrum, we have given a front and a profile view of it as it appeared under the lens of a microscope.

Our specimen is altogether green, except the wings; the reticulations of which are also of the same colour; and as in Sulzer's figure, the clear parts of the wings were strongly tinged with green also.





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P L A T E CCIV.

FIG. I.

SPHINX LINEATA.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ somewhat prism-form, thickest in the middle: tongue mostly exerted: feelers two, reflected: wings deflected.

SPECIFIC CHARACTER

AND

SYNONYMS.

Anterior wings greenish with bands and streaks of white: posterior black, with a red band on each.

SPHINX LINEATA: alis virefcentibus: fascia striisque albis, posticis nigris: fascia rubra. *Fab. Ent. Syst. t. 3. p. 1. 368. 29.*

Sphinx Daucus Cram Inf. 11. tab. 125. fig. D.

Sphinx Koechlini. *Fuessl. Arch. 1. tab. 4.*

This fine Insect is a native of Europe and America. It has a place in every cabinet of English Insects; but on what authority it will be difficult now to determine. It is highly probable, that the testimony of its discovery in England is now forgotten, like that of *Papilio Podalirius*, figured in another part of this work.

The following description of its Caterpillar, which we have seen preserved, as well as represented in foreign drawings, will enable the entomologist to search after it with, at least, a distant chance of success.

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The general colour of the Caterpillar is green, varied with yellow : and some streaks and spots of red down the back : it has also a large black spot on each side every segment ; the head is black ; and it has a spine, or tail. This is the appearance of it in one skin ; it casts its skin several times, and will therefore vary in some degree from this account.—The pupa is yellowish brown, speckled with black. It feeds on *Ladies Bed-straw*, *Madder*, *Goose-grass*, &c.

FIG. II.

SPHINX STATICES.

FORRESTER.

LEPIDOPTERA.

SPHINX.

SPECIFIC CHARACTER.

Anterior wings green blue : posterior brown.

SPHINX STATICES : *Linn. Syst. Nat.* 2. 808. 470.—*Fn. Sv.* 1098.

ZYGÆNA STATICES : viridi cœrulea alis posticis fuscus. *Fab. Ent.*

Syst. T. 3. p. 1. 406. 68.

Geoff. Inf. 2. 129. 40.

Robert. Icon. tab. 30. fig. 1.

Petiv. Mus. 35. 329.

Schæf. Icon. tab. 1. fig. 9.

Esf. Inf. 2. tab. 18. fig. 2.

Found in the winged state in May.—Frequents meadows. The larva is described of a very deep black, with a line of white down the back, and some lunar spots of the same colour in different parts. It feeds on docks.







PLATE CCV.

FIG. 1. 1.

CURCULIO LAPATHI.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, seated on the snout, which is horny and prominent: feelers four, and filiform.

SPECIFIC CHARACTER

AND

SYNONYMS.

Snout long: thighs bidentated: body white and black varied: thorax and wing cases rough with prickles.

CURCULIO LAPATHI: longirostris femoribus bidentatis albo nigroque variis, thorace elytrisque muricatis.—*Linn. Syst. Nat.* 608. 20.—*Fn. Sv.* 591.
Fab. Ent. Syst. 429.

Curculio Lapathi: *Oliv. Inf.* 83. fig. 69. 8.
Degeer. Inf. 5. 223. 16. tab. 7. fig. 1. 2.

Found on the Willow in May.

The figures 1. 1. exhibit the natural size and magnified appearance.

FIG. 2. 2.

CURCULIO HORTULANUS.

COLEOPTERA.

CURCULIO.

SPECIFIC CHARACTER

AND

SYNONYMS.

Somewhat globular: cinereous, with two black spots on the longitudinal future of the wing cafes.

CURCULIO HORTULANUS: subglobosus cinereus, punctis duobus nigro futuræ longitudinalis coleoptrorum.—*Geoff.* 1. 298. 48.

Villers. 1. 202. 118.

Fabricius has omitted this species in his works, though Geoffroy and Villers have both described it. It is found on plants of the *scrophularia* genus (figwort.)

FIG.

FIG. 3. 3.

CURCULIO AVELLANÆ.

COLEOPTERA.

CURCULIO.

SPECIFIC CHARACTER.

Black : a lunated, oblique, whitish mark near the base, and a white spot near the apex of each wing case.

CURCULIO AVELLANÆ: nigra elytris basi interne lunula fasciæque ante apicem albis.

This minute Insect seems to form an intermediate species between *Salicis* and *C. Caprea*. It is an undescribed Insect. In the MS. of T. Marsham, esq; it stands under the specific name *Avellanæ*.— Was found on the Willow in June.









P L A T E CCVI.

PAPILIO IO.

PEACOCK BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated : wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings angulated, indented, fulvous with spots of black : a blue ocellated spot on each wing.

PAPILIO IO : alis angulato dentatis fulvis nigro maculatis : singulis ocello coeruleo.—*Linn. Syst. Nat.* 2. 769. 131.—*Fn. Sv.* 1048.—*Fab. Ent. Syst. I.* 3. p. 4. 88. 276.
Roef. Inf. 1. pap. 1. tab. 3.
Wilk. Pap. tab. 3. a 2.
Reaum. Inf. 1. tab. 25. fig. 1. 2.
Schæf. Icon. tab. 94. fig. 1.
Merian. Europ. 1. tab. 26.
Albin. Inf. tab. 3. fig. 4.
Goed. tab. 1. fig. 23.
Esp. Pap. 1. tab. 5. fig. 2.

We have not a more beautiful Insect in this country than the Peacock Butterfly. It is, indeed, too common to claim the particular notice of Entomologists; but to those who admire more the splendid species of this beautiful tribe of creatures, the representation will probably prove acceptable. The underfide is entirely of a shining dark colour, with innumerable waved streaks of black. The upperfide is represented in the annexed plate.

The Caterpillars, which are black, beset with spines, and elegantly marked with rows of white spots, are frequently found feeding on the nettles, and other low herbage by the sides of ditches. They change to the chrysalis state the first week in July, and appear in the winged state twenty-one days after.



P L A T E CCVII.

JULUS TERRESTRIS.

APTERA.

GENERIC CHARACTER.

Lip crenate, and emarginate: antennæ moniliform: feelers two filiform; body long femicylindrical, consisting of numerous transverse segments: legs numerous, twice as many each side as there are segments of the body.

SPECIFIC CHARACTER

AND

SYNONYMS.

Feet 100 each side.

JULUS TERRESTRIS: pedibus utrinque 100: *Linn. Syst. Nat.* 2. 1065. 3.—*Fn. Sv.* 2066.—*Fab. Ent. Syst. I.* 2. 394. 8.
Degeer Inf. 7. 578.
Geoff. Inf. 679. 1.
Frisch. Inf. 2. tab. 8. fig. 3.
Sulz. Inf. tab. 24. fig. 156.
Sulz. Hist. Inf. tab. 30. fig. 15.

This singular creature is found of a vast magnitude in foreign countries. We possess one of that kind between four and five inches in length. In Europe, or at least in England, they are seldom considerably larger than the annexed figure.

It has two pair of feet to every segment of the body. These are very minute, but give a remarkable appearance to the Insect. It is found in damp places, generally under stones.

P L A T E



P L A T E CCVIII.

PHALÆNA FIMBRIA.

BROAD-BORDERED YELLOW UNDERWING MOTH,

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base; wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS,

NOCTUA.

Thorax crested; anterior wings clay colour, marked with obscure bands or streaks; posterior pair reddish orange, with a broad bar of black.

PHALÆNA FIMBRIA: cristatata alis planis griseo fasciatis; posticis helvolis: macula lineari atra. *Linn. Syst. Nat.* 2, 842. 123.—*Fab. Ent. Syst. T.* 3. p. 2. 59. 165, *Wien. Verz.* 87. 18. *Schreb. Inf. fig.* 9.

This rare Insect is distinguished from two very common species that are allied to it, by the broad border of black on the under wings, as its trivial name implies. In the larva state, it is one of that kind collectors denominate under-ground feeders: subsisting chiefly on the roots of grass, and never coming out of the ground till the evening, for which reason it is very rarely taken.

The

The Moth is very delicate in its appearance; the Caterpillar quite plain. Our specimen changed to crysalis early in May, and produced the Moth in the middle of June.

Fabricius was not informed that it was a native of this country, as appears by his last work, in which he describes it only as a native of Germany.

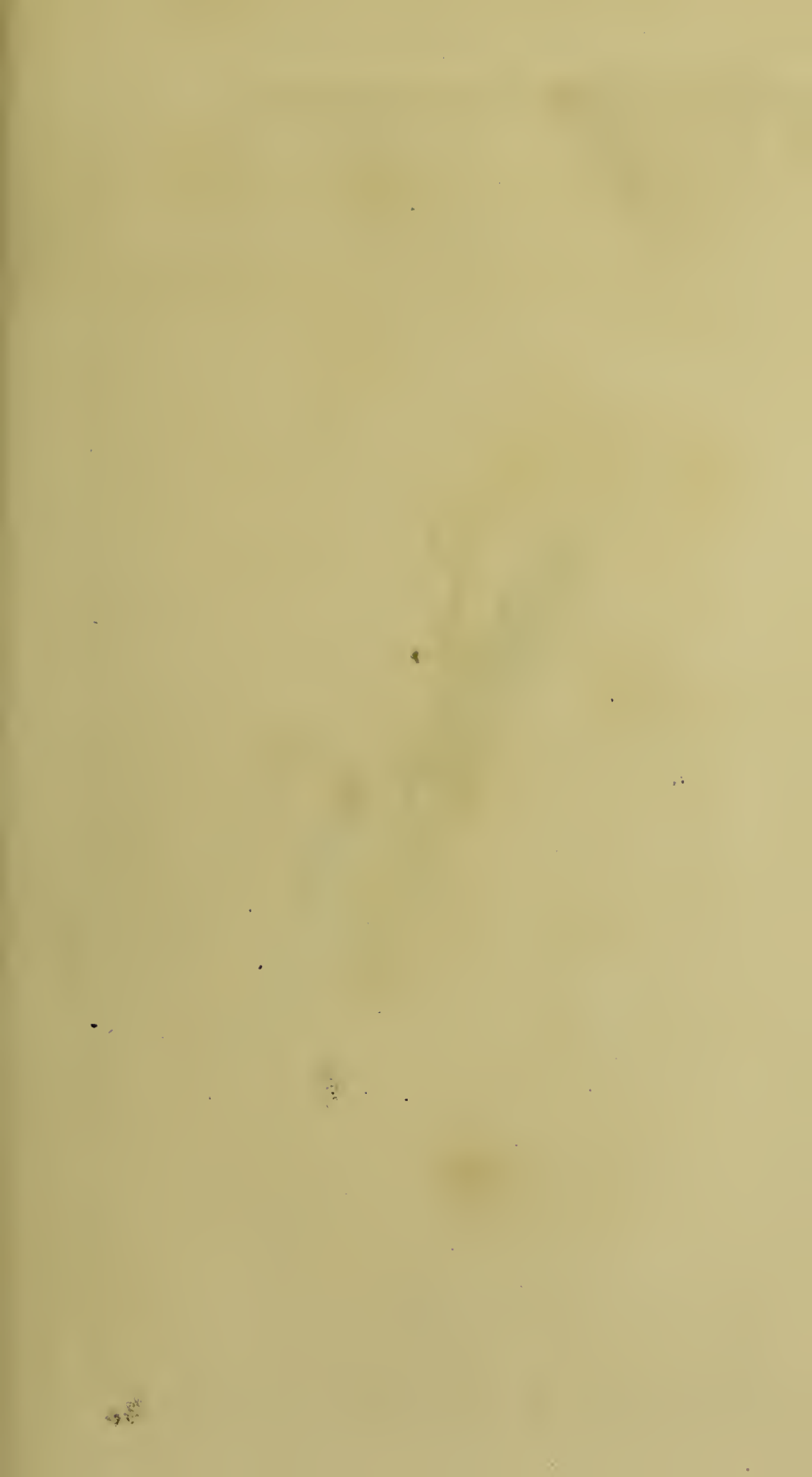




PLATE CCIX.

CERAMBYX LINEATOCOLLIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ fetaceous: feelers four: thorax spinous, or gibbous: wing cafes linear.

SPECIFIC CHARACTER.

Villous greenish: thorax unarmed, cylindrical with yellow lines: wing cafes fuscous, and without spots.

CERAMBYX LINEATOCOLLIS: villosus virridescens, thorace mutico cylindrico flavo-lineato, elytris immaculatis fuscis.—
Marsh. Ent. Brit.

We must consider this as a new British species of *Cerambyx*, neither Linnæus nor Fabricius having given any description of it:

This appears to be local: the only two specimens that have occurred to our notice, having been taken in the Isle of Ely, Cambridgeshire. Our specimen was found on the bark of the willow.





P L A T E CCX.

PHALÆNA LANESTRIS.

LITTLE EGGER MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

BOMBYX.

Antennæ of the male pectinated, of the female setaceous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings ferrugineous: first pair with a white stripe: a spot of the same near the base, and another in the middle.

PHALÆNA LANESTRIS: alis reversis ferrugineis: striga alba, anticis puncto basique albis.—*Linn. Syst. Nat.* 2. 815. 28.—*Fn. Sv.* 1105.

Fab. Ent. Syst. 3. p. 1. 429. 68.

Wien. Verz. 57. 2.

Roef. Inf. 1. phal. 2. tab. 62.

The Caterpillars of the little Egger Moth, feed on black and white thorn, willow, lime-tree, &c. The female deposits a large cluster of eggs in a tuft of hair collected from her body. When these

these are hatched, the young begin to spin a strong white web, which they enlarge as their society increases; they remain together till they have devoured all the leaves of the plant on which they are hatched, or till they are arrived at full size to change into the chrysalis state.

These Caterpillars are not very uncommon in some parts of the country, especially in Kent. They are ready to change to chrysalis state late in June. The Moth is not produced till April following.

The trivial English name, Egger Moth, is given to this, and two or three other Moths, from the similitude of the case in which the chrysalis is inclosed to the shape of an egg.





P L A T E CCXI.

PAPILIO MACHAON.

SWALLOW-TAIL BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated: wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings tailed, yellow above and beneath, with fuscous border, and yellow lunar spots: anal angle fulvous.

PAPILIO MACHAON: alis caudatis concoloribus flavis: limbo fusco; lunulis flavis, angulo ani fulvo.—*Linn. Syst. Nat.* 2. 750. 33.—*Fn. Sv.* 1031.—*Fab. Ent. Syst.* 2. p. 1. 87. *Roef. Inf.* 1. pap. 2. tab. 1. *Wilk. Pap. tab.* 47. tab. 1. a. 1. *Merian. Europ. Inf.* 94. *Frisch. Inf.* 2. tab. 10. *Schæff. Icon. tab.* 45. fig. 1. 2. *Seba Musf.* 4. tab. 32. fig. 9. 10. *Geoff. Inf.* 2. 54. 23. *Esp. Pap.* 1. tab. 1. fig. 1.

Papilio Machaon and *Papilio Podalirius* are the only two species of Swallow-tail Butterflies that have been found in England. Both are very scarce, but *Papilio Machaon* less so than *Papilio Podalirius*, of which a figure has been given in another part of this work.

Entomologists mention several parts of the country in which it has been taken, both in the larva and winged state. Harris says it feeds on wild fennel and carrots; that one he found remained in the chrysalis state from the 23d of September to May the 15th following, and another, that changed July the 15th, produced a butterfly the 10th of August. He adds, that the species was found in the meadows of Bristol and Westram.

From the number of foreign authors who have given figures of the Butterfly, we may imagine that it is very common on the Continent. Those preserved in cabinets of English Insects are generally brought from Germany, from whence also we sometimes receive preserved specimens of the Caterpillars.





P L A T E CCXII.

MUTILLA EUROPÆA.

EUROPEAN MUTILLA.

HYMENOPTERA.

GENERIC CHARACTER.

Antennæ filiform : feelers four, the articulations obconic, seated on the tip of the lip : jaw membranous at the apex : lip projecting : in most species no wings : body pubescent : thorax retuse behind : sting pungent and concealed.

SPECIFIC CHARACTER

AND

SYNONYMS.

Head black : thorax red : abdomen black ; margins of some segments whitish.

MUTILLA EUROPÆA : nigra thorace rufo, abdominis segmentis margine albo.—*Fab. Ent. Syst. t. 3. 368. 9.*

Mutilla Europæa, nigra abdomine fesciis duabus albis, thorace antice rufo.—*Linn. Syst. Nat. 2. 966. 4.—Fn. Sv. 1727.*
Sulz. Hist. Inf. tab. 27. fig. 23. 24.

Apis Aptera : *Udm. Diff. 98. tab. 17.*

The Mutillæ seem less clearly defined than most of the Linnæan genera. That author described only a small number of the species, and was even doubtful whether several that were placed under that division of his system did not more properly belong to some other, especially to the ichneumons, among which several apterous Insects are included.

The cause of this uncertainty may be partly attributed to our entire ignorance of their manner of life or transformations. Some of the Mutillæ have wings, and others are without. Authors have considered the apterous Insects as the females, and the winged kind as the males, which opinion is countenanced by numberless instances in almost every class of Insects. Others have however maintained that both males and females are winged, and that the apterous Insects were neuters, presuming in support of such opinion, that the Mutillæ lived in societies like the Wasps, Ants, and Bees.—From observations on a number of exotic species of this tribe, we have no doubt that the winged Insects are males, and the apterous kind females.

Yeates alludes to three species of Mutillæ that have been found in England, but names no other than the *Mutilla Europæa*; and this is the only kind we have ever found. We have taken it on a sandy pathway, near the entrance of Coomb Wood, Surry.



P L A T E CCXIII.

PHALÆNA PRÆCOX.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

NOCTUA.

Thorax crested: wings deflected: anterior pair ash-colour with two spots, and a short dash of red behind.

PHALÆNA PRÆCOX: cristata alis deflexis cineris bimaculatis: posticis fascia rufa abbreviata.—*Linn. Syst. Nat.* 2. 854. 174.—*Fab. Ent. Syst.* I. 3. p. 2. 97. 289.
Roef. Inf. 1. phal. 2. tab. 51.

When the late Duchefs of Portland honoured the scientific as well as practical part of Entomology with her patronage, her Grace discovered, and reared from the Caterpillar state, several species of the Phalæna tribe, not before known as natives of this country; and among the number of those may be enumerated this elegant species. The brood was found in one of the Portland isles.

Fabricius says the larva feeds on the thistle. The rarity of this creature induced us to depart from our usual method, and copy the larva and pupa from the plate in the works of Roefel, apprehending it would be particularly interesting to English naturalists in general, as that author alone has represented it in those states; and no collector that we are informed has met with it within the last fifteen years.



P L A T E C C X I V .

P H A L Æ N A R U S S U L A .

C L O U D E D B U F F M O T H .

L E P I D O P T E R A .

G E N E R I C C H A R A C T E R .

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

S P E C I F I C C H A R A C T E R

A N D

S Y N O N Y M S .

Wings deflected: yellow: margin fanguineous with fuscous lunule: antennæ red.

P H A L Æ N A R U S S U L A : alis deflexis luteis: margine fanguineo lunulaque fusca, antennis fanguineis.—*Fab. Ent. Syst.* I. 3. p. 1. 180.—*Linn. Syst. Nat.* 2. 830. 71.
Schæff. Icon. tab. 83. fig. 4, 5.
Clerk. Icon. tab. 4. fig. 1.
Raj. Inf. 228. 75.

As the *Phalænæ* are not remarkable for a variety of gay colours, like those of the *Papilio* genus, an exception to a general rule in the beautiful species before us, more strongly demands our notice. The male *Phalæna Russula*, which is known by the pectinated antennæ, is of a fine golden yellow, with a rich, though narrow marginal band of fanguineous red round the wings. The female is a pretty Insect, but is more inclined to brown throughout than the male.

This species has been supposed to feed on grafs in the larva state, but as collectors have very rarely reared it from that state, it has been difficult to determine its proper food. Fabricius mentions lettuce and scabious or devil's-bit. The larva is hairy, and in many respects very much resembles that of the Garden Tiger Moth, from which we may perhaps infer that it is what collectors usually term a general feeder.

We found the larva in May; shortly after it spun a web and passed into the pupa state, from which the moth was produced the 11th of June following.



P L A T E CCXV.

PHALANGIUM CANCROIDES.

APTERA.

GENERIC CHARACTER.

Mouth with horny mandibles, the second joint with a very sharp moveable cheliform tooth: feelers filiform: no antennæ: eyes two on the crown and two at the sides: legs eight: abdomen usually rounded.

SPECIFIC CHARACTER

AND

SYNONYMS,

Body obovate, and depressed: claws smooth, hairy at the ends.

PHALANGIUM CANCROIDES: abdomine obovato depresso, chelis lævibus: digitis pilosis.—*Lin. Syst. Nat.* 2: 1028. 4.
—*Fn. Sv.* 1968.

SCORPIO CANCROIDES: abdomine ecaudato ovato depresso fusco, manibus oblongis.—*Fab. Ent. Syst. T.* 2. 436. 10.

Chelifer abdomine lineis transversis.—*Geoff. Inf.* 2. 618. 1.

Chelifer europæus obscure fuscis corpore ovato depresso, chelis elongatis.—*Degeer. Inf.* 7. 355. 2. tab. 9. fig. 4.

Roef. Inf. 3. tab. 64.

Frisch. Inf. 8. tab. 1.

Schæff. Elem. tab. 38.

The synonyms sufficiently denote the unsettled opinion of eminent naturalists in respect of the proper genus to which our Insect should be referred. We have followed the definition of Linnæus, because
it

it appears to us more characteristic of the creature, which should have a lengthened articulated tail, terminated in a sharp crooked sting, to warrant us in placing it among the Scorpions. In the system of Fabricius this forms no part of his generical character, but those who are accustomed to depend only on the writings of Linnæus, would be perplexed to reconcile the apparent difference between the *Phalangium* of that author, and the *Scorpio* of Fabricius.

The general appearance of this creature, except the want of tail, is precisely that of a Scorpion in miniature.

Mr. Adams, in his Essay on the Microscope, has figured and described a new species of this genus; it is smaller, and differs in form from our present species: he calls it the Lobster Insect. We believe *Phalangium Cancroides* is the largest Insect of the genus that resembles a Scorpion, and is found in England.

This Insect is sometimes found in the covers of old books, in rotten wood, and other damp and decayed substances. We once found it fastened on the body of the *Musca Vomitoria*, (Common Flesh Fly,) from which it could not be extricated without killing and tearing the fly into pieces.

Roefel has given a figure of it, and represented a parcel of its eggs. They are of an oblong form, colour greenish, and appear to be deposited in roundish clusters of about thirty or forty eggs in each.

The natural size of our Insect is represented at Fig. 1.



P L A T E CCXVI.

PHALÆNA LIBATRIX.

HERALD MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax crested : wings deflected, varied with red and grey ; edges deeply ferrated or indented : anterior pair with two white dots.

PHALÆNA LIBATRIX : cristata alis incumbentibus dentato erosi rufo. griseis : punctis duobus albis.—*Lin. Syst. Nat.* 2. 831. 78.—*Fn. Sv.* 1143.

Fab. Ent. Syst. 1. 3. p, 264. 181.

Wien. Verz. 62. 1.

Geoff. Inf. 1. 121. 26.

Goed. Inf. 1. tab. 67.

Albin. Inf. tab. 32. fig. 50.

Schæff. Icon. tab. 24. fig. 1. 2.

Roef. Inf. 4. tab. 20.

Harris Inf. tab. 1. fig. C. D.

Pod. Inf. 92. tab. 2. fig. 9.

The Caterpillar of this Insect is generally found under the bark of the willow and fallow, or on the rose. It is probable there are two broods of it in the year, being sometimes taken in the winged state early in the summer, but more commonly in the month of October; this is the more likely, as the English Aurelians first called it the Herald, from an idea that its appearance warned them of approaching winter,

This Insect remains about twenty-eight days in the pupa state, the Caterpillar not being found till the beginning of September.

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